Original Article

Palliative Care Medical Education in European Universities: A Descriptive Study and Numerical Scoring System Proposal for Assessing Educational Development

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Abstract

Context. The lack of palliative medicine (PM) education has been identified as a barrier to the development of the discipline. A number of international institutions have called for its implementation within undergraduate medical curricula.

Objectives. The objectives are to describe the situation of undergraduate PM education in Europe and to propose a scoring system to evaluate its status.

Methods. This descriptive study was conducted with data provided by key experts from countries of the World Health Organization European Region ($n = 53$). A numerical scoring system was developed through consensus techniques.

Results. Forty-three countries (81%) provided the requested information. In 13 countries (30%), a PM course is taught in all medical schools, being compulsory in six of them (14%). In 15 countries (35%), PM is taught in at least one university. In 14 countries (33%), PM is not taught within medical curricula. A full professor of PM was identified in 40% of countries. Three indicators were developed to construct a scale (rank 0–100) of educational development: 1) proportion of medical schools that teach PM (weight = 32%); 2) proportion of medical schools that offer PM as a compulsory subject (weight = 40%); 3) total number of PM professors (weight = 28%). The highest level of PM educational development was found in Israel, Norway, the U.K., Belgium, France, Austria, Germany, and Ireland.

Conclusion. PM is taught in a substantial number of undergraduate medical programs at European universities, and a qualified teaching structure is emerging; however, there is a wide variation in the level of PM educational development between individual countries. J Pain Symptom Manage 2015;50:516–523.

Key Words

Palliative medicine, palliative care, medical education, undergraduate education, development, WHO European Region

Introduction

The expansion of aging populations and changes in disease patterns across Europe in recent years have resulted in an increasing prevalence of patients with cancer, neurovegetative, and chronic diseases.[1,2] These diseases may present with difficult symptoms that follow complex trajectories at the end of life, and physicians should be appropriately trained so as to provide patients with effective palliative care (PC).[3]

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In many countries, physicians have received no training in palliative medicine (PM) even when they have completed their undergraduate studies.[4–6] Therefore, more emphasis should be placed on developing skills such as interprofessional teamwork, symptom management, psychological and spiritual issues, and communication skills. These are areas dealt with by PM and have historically been only partly integrated into medical curricula.[7] Many students perceive PM courses at university in a positive manner and consider them essential for their development as physicians.[8,9] Moreover, PM has shown a positive impact both on patient's quality of life and on the economic outcomes of the health services where PM has been implemented.

In spite of its relevance for future physicians, there is a gap between academia and PM; although PM is positioned to become a recognized medical specialty, it is still largely omitted from university curricula.[10] This lack of PC education and training opportunities has been identified as a barrier to the development of the discipline.[11,12] Therefore, including PM as an integral part of medical curricula at the university level could prove to be of vital importance and may also serve to provide an accurate indicator of the status of PC development in each individual country.

A number of international institutions have called for the implementation of PM education within undergraduate medical curricula.[3,13,14] Globally, undergraduate PM courses commenced several years ago in a number of non-European countries (e.g., Australia, U.S., and Canada), where substantial efforts were made to improve PM curricula. In Australia, since the implementation of the National Palliative Care Strategy in 2000, continuing research has been included in the "Palliative Care Curriculum for Undergraduates Initiative" with the aim of promoting and supporting the inclusion of a holistic workforce approach to PC education in all undergraduate health care training.[15] In the U.S., PM is not specifically mentioned in the standards of the institution recognized by the U.S. Department of Education for the accreditation of medical education programs (Liaison Committee on Medical Education), but several studies demonstrate the ways in which PM has been successfully integrated into U.S. medical school curricula.[16,17] In 1993, Canada developed their PC medical curriculum by outlining specific goals and objectives for teaching the discipline in undergraduate medical programs.[18] By using an international approach, research has been carried out more generally to delineate the characteristics of undergraduate medical education programs in PM.[19]

In the late 1980s, European PC experts joined together to form the European Association for Palliative Care (EAPC), which began to develop guidelines for PC education and training. In a multiprofessional context, these recommendations were gradually improved over a period of time, culminating in the formation of the EAPC Task Force on Medical Education (TFME) in 2011, which embarked on a new program of work to refine its original methods and provide updated information on the status of PM education in each European country. In 2013, the TFME published recommendations for the development of PM in the undergraduate curricula of European medical schools to be organized in each country, taking into consideration its own characteristics and the six topics recommended for inclusion in the undergraduate curricula: 1) basics of PC, 2) pain and symptom management, 3) psychosocial and spiritual aspects, 4) ethical and legal issues, 5) communication, and 6) teamwork and self-reflection.[7]

To evaluate the status of PM education and to make comparisons, measurement by indicators has been shown to be a relevant tool. Although there are ways of assessing without quantitative measures, such as qualitative indicators, quantitative measures facilitate accountability and allow for making categorizations afterward.[20]

In this article, we aim to describe the status of PM education in undergraduate medical curricula in the World Health Organization (WHO) European Region and to propose a numerical scoring system to assess and compare its current state.

Methods

We designed a descriptive study using secondary data provided by key experts in PC from countries of the WHO European Region ($n = 53$).[21] We developed relevant indicators and a numerical scoring system through consensus techniques to assess the status of PC education in European countries.

Data Source and Validation

We used the data collected for the *EAPC Atlas of Palliative Care in Europe 2013* (EAPC Atlas).[22] Two separate surveys were e-mailed to at least two PC key experts from each of the 53 countries of the WHO European Region. Key expert participants were physicians, presidents, or board members from national associations for PM or PC, mainly designated by the national PC associations to answer the surveys. The first survey, the Facts Questionnaire, collected quantitative information on the availability, delivery, and organization of PC; the second, the Eurobarometer Survey, collected qualitative information related to the status of, barriers to, and

opportunities for national PC development. The information collected was subjected to peer review by three experts from each country (different from those who answered the surveys).[22,23] A series of questions from the Facts Questionnaire were specifically developed by TFME experts, including the number of faculties of medicine existing in each country, the existence of PM courses at medical schools, whether these courses are compulsory, and the number of teachers of PM and their category. A three-type classification of teachers was arbitrarily adopted: full professor (chair/first-class academic professor), assistant professor (titular), and "other" category of professor (lower level category of academic professor, e.g., part-time; Appendix I). The questionnaire explained that we had adopted these three classifications of teachers; the first and second classes refer to official senior academic bodies. The questionnaire requested information relating to PM teachers in faculties of medicine; there was a separate question related to teachers of PM who were not medically trained, but this information was not analyzed because of insufficient data.

To confirm the validity and accuracy of the information obtained in the EAPC Atlas, three authors of this article (a member of the TFME, a public health expert, and a database manager) reviewed the data from each country, comparing it with qualitative information from the Eurobarometer Survey (Appendix I). To confirm the accuracy of the information, we sent clarification queries to key experts in each country. Furthermore, we compared the results obtained with other TFME projects.

The EAPC Atlas study was finalized in March 2013, with clarification queries being sent to key experts, and we analyzed their responses until January 2014. The data we present in this article relate to the state of PM education in European universities during the academic years 2012–2013 and 2013–2014.

Indicators and Proposed Numerical Scoring System

Six TFME experts discussed the data from the EAPC Atlas in a face-to-face meeting and, through nominal group dynamics (consensus techniques based on group discussions and individual voting processes designed to prioritize), identified three potential indicators to reach the objectives of this study. After two rounds of group discussion and voting for weights for each indicator (range of relevance: 1–10; weights for each indicator calculated considering its percentage in relation to the sum of all indicators), the experts defined a numerical score system (scale 0–100) to assess the development of PC undergraduate medical education in each country of the WHO European Region.

We present this information in a table with data for each indicator and with the score given once the scale of educational development was applied (Table 2); country distribution is shown in a corresponding graph (Fig. 1). Countries with the same score have been ordered alphabetically.

Results

We present data from 43 (81%) of the 53 countries in the WHO European Region; in four of them (8%), we were unable to identify key informants (Monaco, San Marino, Turkmenistan, and Uzbekistan) and for five others (9%), we received no response or invalid information (Turkey, Ukraine, Tajikistan, Bosnia-Herzegovina, and Kyrgyzstan); Andorra also was not included because there is no faculty of medicine in the country.[22] We sent clarification queries to 20 countries (38%), and when data were compared with other projects carried out by EAPC Taskforces, information was able to be verified for 41 of 43 countries. (We could not verify information for The Netherlands or the Republic of Macedonia.)

Medical Schools that Offer PM Education

The data demonstrate that a minimum of 28 countries (65%) include PM in the curriculum of at least one of its medical universities, and in 13 (30%), the subject is taught in all medical schools: the U.K., Israel, Norway, Belgium, France, Austria, Germany, Ireland, Malta, the Republic of Moldova, Hungary, Switzerland, and Slovenia. In five countries (12%; Lithuania, Poland, Latvia, Finland, and Spain), PM is taught in at least half of the country's medical universities; in 10 other countries (23%), less than 50% of medical schools teach PM. Fourteen countries (33%) do not currently include PM courses in their undergraduate medical curriculum (Table 2).

Is the Course Compulsory?

In six countries (14%), a PM course is compulsory in all medical schools in the country (the U.K., Israel, Norway, Belgium, France, and Malta); in other countries, the university determines whether the course is compulsory ($n = 11$; Austria, Germany, Ireland, Lithuania, Poland, the Republic of Moldova, Georgia, Latvia, Finland, Spain, and Cyprus). In three countries (7%), the subject is taught at all universities, but is optional for students to select (Hungary, Switzerland, and Slovenia), whereas in Italy, Portugal, Russia, Sweden, Belarus, the Czech Republic, Greece, and Romania, PM is only offered in a limited number of universities as an optional course (and not offered as an option in many universities at all; Table 2).

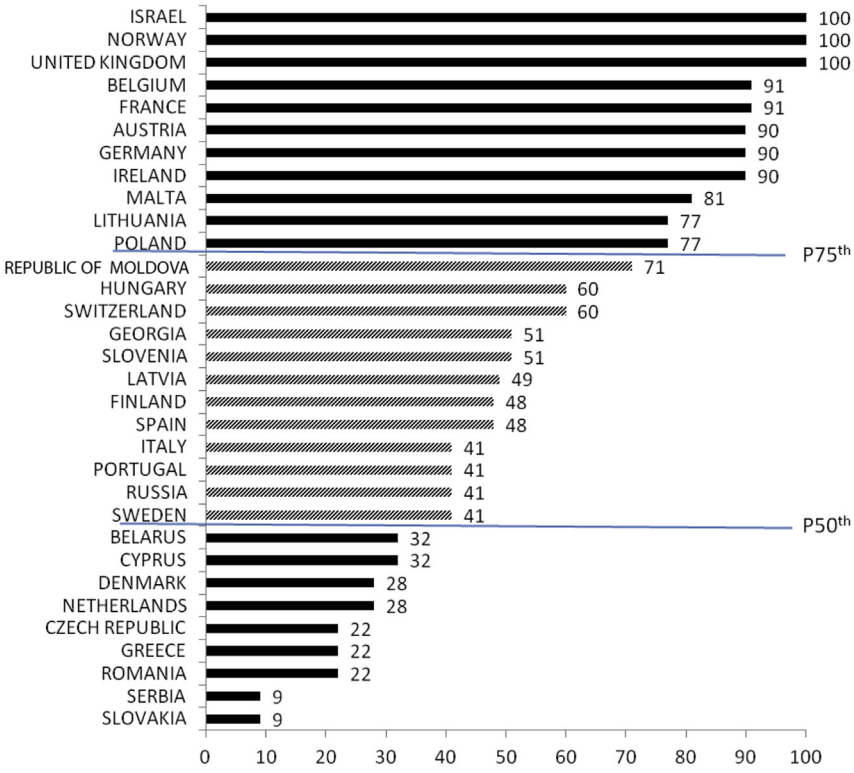

Fig. 1. European countries ordered according to the score assigned by the EAPC expert committee to assess the state of PM undergraduate education. Countries with the same score have been ordered alphabetically. Countries without PC courses in undergraduate medical curricula or teachers of the discipline: Albania, Andorra, Armenia, Azerbaijan, Bulgaria, Croatia, Estonia, Iceland, Kazakhstan, Montenegro, the Republic of Macedonia, Turkey, and Ukraine. EAPC = European Association for Palliative Care; PM = palliative medicine; PC = palliative care.

PM University Faculty

In total, 17 countries (40%) reported having full professors in PM; in eight countries (19%; Austria, Germany, Poland, Hungary, Italy, Russia, Sweden, and The Netherlands), full professors outnumber assistant professors and "other professors." In 14 countries (33%), medical schools only have either assistant professors or "other professors" (Table 2).

Proposed Indicators and Numerical Scoring System to Assess PM Educational Development in Europe

Using consensus techniques, six TFME experts developed three weighted indicators using the available data: proportion of medical schools that teach PM (MS); proportion of medical schools that teach PM as a compulsory subject (MC); PM professor workforce capacity (WC). Through consensus dynamics, indicators were prioritized by voting as follows: 1) MC (mean [*M*] = 9.5), 2) MS (*M* = 7.5), and 3) WC (*M* = 6.5). This prioritization corresponds to their relative weight (MC = 40%, MS = 32%, and WC = 28%), and a global scale was designed with a range of 0−100, formed by the different values of each indicator. (Table 1)

Scoring PM University Education in Europe

Eleven countries (26%) scored more than 77 points (75th percentile), with the U.K., Israel, Norway, Belgium, France, Austria, Germany, and Ireland scoring the highest (90 points or more). In these eight countries, all medical schools teach PM, and it is mandatory in the U.K., Israel Norway, Belgium, and France. In relation to WC, Germany and the U.K. have the highest prevalence of full professors (nine and eight, respectively) and although Belgium and France reported having no full professors, they both reported having at least six assistant professors. Malta, Lithuania, and Poland scored between 77 and 90 points; Malta teaches PM in all medical faculties in the country as a compulsory subject, and Lithuania and Poland reported having four and two full professors, respectively (Table 2).

Twelve countries (28%) scored between 77 and 41 points (50th percentile). Among them, PM is taught in all medical schools in the Republic of Moldova, Hungary, Switzerland, and Slovenia; in Finland, Spain and Latvia, PM is taught in medical schools at the respective rates of 60%, 51%, and 50%, whereas in Georgia, Italy, Portugal, Russia, and Sweden, it is taught in less than half of all medical schools. In the

Table 1
Numerical Scoring Proposal Developed by an EAPC Expert Committee Through Consensus Techniques to Assess the State of PM in European Undergraduate Education with Available Indicators

Indicator/Formula	Experts Prioritization Median Voting (Weight)	Indicator Categories	Total Points
PM courses in undergraduate medical degree, $\frac{\text{No. of medical schools teaching PM}}{\text{Total no. of medical schools in the country}} \times 100$	7.5 (32%)	100%	32
		from 99 to 50%	19
		from 49 to 1%	13
		0%	0
Compulsory PM course in undergraduate medical education, $\frac{\text{Number of medical schools teaching PM as mandatory subject}}{\text{Total number of medical schools in the country}} \times 100$	9.5 (40%)	100%	40
		from 99 to 50%	30
		from 49 to 1%	10
		0%	0
PM professor workforce capacity[a]	6.5 (28%)	At least one full professor	28
Full professor		At least one assistant professor	19
Assistant professor		"Other professors" only	9
"Other professor"		No professors	0

[a]Experts decided to rate the workforce capacity according to the best situation available, independent of the number of professors in a lower rank.

Republic of Moldova, Latvia, Finland, Spain, and Georgia, PM is mandatory in some medical faculties (83%, 50%, 40%, 20%, and 10%, respectively). Hungary has five full professors, Italy has two and Switzerland, Georgia, Portugal, Russia, and Sweden all have one each (Table 2).

Belarus, Cyprus, Denmark, The Netherlands, the Czech Republic, Greece, Romania, Serbia, and Slovakia all scored less than 41 and more than 0 points (25th percentile). Belarus, Cyprus, the Czech Republic, Greece, and Romania have at least one university that teaches PM, but in very small percentages (less than 35%); the PM course in Cyprus is the only compulsory one. With regard to WC dedicated to PM, The Netherlands has seven full professors and Denmark has two. In the other seven countries, the teaching staff includes assistant professors or "other professors" at differing rates (Table 2).

Eleven countries were not scored because PM is not taught in any of their medical schools, and there are no professors dedicated to teaching the discipline (Table 2).

Discussion

More than half of all countries in the WHO European Region include PM education in medical school curricula, although it is mandatory at different levels and professor capacity varies between countries. After scoring each country according to the TFME proposal, we noted clear differences in the development of PM education within the European context.

Countries such as the U.K., Israel, Norway, Belgium, France, Austria, Germany, and Ireland teach PM in all of their medical schools, and most of them do so as a compulsory subject supported by an appropriately qualified teaching structure. In contrast, in a considerable number of countries, PM is absent from university medical education altogether. Significant variability is found between these two groups of countries as far as the proportion of medical schools that offer training in PM, its status as either mandatory or optional, and the existence of a teaching structure that is capable of providing medical students with the knowledge and skills necessary to provide effective PC services.

The number of countries that already teach PM in their universities and the fact that it is a compulsory subject in many of them demonstrate how the development of PM is progressing within the European university system. In this regard, some countries (such as Germany and Switzerland) have even passed specific legislation to regulate the compulsory nature of this type of training for health care professionals[24]; other countries, like Denmark, are currently moving toward a similar position. Progress is also evident in specialized PM education; in 2014, 18 countries had recognized specialization in PM.[25] If PM is taught to future physicians in the undergraduate curriculum and is offered as a medical specialty, PM undoubtedly has the potential to become a well-established scientific discipline.[10,26]

Formal undergraduate medical education is only a part of PC training. In this study, we identified countries in which PM teaching is subsumed within the curriculum of other courses (oncology, geriatrics, etc.). Our study also highlighted countries where full professors are dedicated to developing a PM curriculum, but they have not yet formalized PM in undergraduate courses. Other health professionals (social workers, nurses, physiotherapists, etc.) also need basic PM training,[22] and new initiatives are necessary to involve more integration of PM education within interprofessional courses to better reflect the interdisciplinary nature of this work.

Table 2

Undergraduate Education, Workforce Capacity, and Indicator Scores (Ordered Alphabetically When Countries Have the Same Score)

		Undergraduate Education			Workforce Capacity			Score			
Country	Medical Schools *n*[a]	Teaching PC[b] *N* (%)	Mandatory Component[c] *N* (%)	Optional Component[d] *N* (%)	Full Professor *n*	Assistant Professor *N*	Other Professor *n*	MS[e] Pts	MC[f] Pts	WC[g] Pts	Total[h] Pts
Israel	4	4 (100)	4 (100)	0 (0)	1	0	1	32	40	28	100
Norway	4	4 (100)	4 (100)	0 (0)	2	0	2	32	40	28	100
U.K.[i]	30	30 (100)	30 (100)	0 (0)	8	8	13	32	40	28	100
Belgium	7	7 (100)	7 (100)	0 (0)	0	6	0	32	40	19	91
France	36	36 (100)	36 (100)	0 (0)	0	6	n/a	32	40	19	91
Austria	4	4 (100)	3 (75)	1 (25)	2	0	0	32	30	28	90
Germany[j]	37	37 (100)	24 (65)	13 (35)	9	1	2	32	30	28	90
Ireland	6	6 (100)	5 (83)	1 (17)	1	0	1	32	30	28	90
Malta	1	1 (100)	1 (100)	0 (0)	0	0	2	32	40	9	81
Lithuania	9	8 (89)	6 (67)	2 (22)	2	3	2	19	30	28	77
Poland	14	10 (71)	9 (64)	1 (7)	4	0	2	19	30	28	77
Republic of Moldova	6	6 (100)	5 (83)	1 (17)	0	0	19	32	30	9	71
Hungary	4	4 (100)	0 (0)	4 (100)	5	0	0	32	0	28	60
Switzerland	5	5 (100)	0 (0)	5 (100)	1	0	3	32	0	28	60
Georgia	10	3 (30)	1 (10)	2 (20)	1	2	3	13	10	28	51
Slovenia	2	2 (100)	0 (0)	2 (100)	0	1	0	32	0	19	51
Latvia	4	2 (50)	2 (50)	0 (0)	0	0	0	19	30	0	49
Finland	5	3 (60)	2 (40)	1 (20)	0	2	1	19	10	19	48
Spain	41	21 (51)	8 (20)	13 (32)	0	3	5	19	10	19	48
Italy	78	5 (6)	0 (0)	5 (6)	2	0	1	13	0	28	41
Portugal	7	2 (29)	0 (0)	2 (29)	1	n/a	2	13	0	28	41
Russia	88	5 (6)	0 (0)	5 (6)	1	0	0	13	0	28	41
Sweden	7	3 (43)	0 (0)	3 (43)	1	0	0	13	0	28	41
Belarus	4	1 (25)	0 (0)	1 (25)	0	1	3	13	0	19	32
Cyprus	3	1 (33)	1 (33)	0 (0)	0	0	1	13	10	9	32
Denmark[k]	4	0 (0)	0 (0)	0 (0)	2	0	0	0	0	28	28
The Netherlands	28	n/a	n/a	n/a	7	2	2	n/a	n/a	28	28
Czech Republic	7	2 (29)	0 (0)	2 (29)	0	0	4	13	0	9	22
Greece	7	1 (14)	0 (0)	1 (14)	0	0	2	13	0	9	22
Romania	11	2 (18)	0 (0)	2 (18)	0	0	2	13	0	9	22
Serbia	4	0 (0)	0 (0)	0 (0)	0	0	3	0	0	9	9
Slovakia	4	0 (0)	0 (0)	0 (0)	0	0	2	0	0	9	9
Albania[l]	2	0 (0)	0 (0)	0 (0)	0	0	0	0	0	0	0
Armenia	3	0 (0)	0 (0)	0 (0)	0	0	0	0	0	0	0
Azerbaijan	1	0 (0)	0 (0)	0 (0)	0	0	0	0	0	0	0
Bulgaria	5	0 (0)	0 (0)	0 (0)	0	0	0	0	0	0	0
Croatia	10	0 (0)	0 (0)	0 (0)	0	0	0	0	0	0	0
Estonia	1	0 (0)	0 (0)	0 (0)	0	0	0	0	0	0	0
Iceland	1	0 (0)	0 (0)	0 (0)	0	0	0	0	0	0	0
Kazakhstan	6	0 (0)	0 (0)	0 (0)	0	0	0	0	0	0	0
Luxembourg	0	0 (0)	0 (0)	0 (0)	0	0	0	n/a	n/a	0	0
Montenegro	2	0 (0)	0 (0)	0 (0)	0	0	0	0	0	0	0
Republic of Macedonia	3	0 (0)	0 (0)	0 (0)	0	0	0	0	0	0	0

Pts = points; n/a = no information available.

[a]Total number of medical schools in the country.

[b]Total number of medical schools teaching some palliative medicine course in the country.

[c]Total number of medical schools teaching palliative medicine as a mandatory subject in the country.

[d]Total number of medical schools teaching palliative medicine as an optional subject in the country.

[e]MS: Points for proportion of medical schools with palliative medicine teaching indicator (MS = number of medical schools teaching some palliative medicine/total number of medical schools in the country).

[f]MC: Points for mandatory component of palliative medicine teaching indicator (MC = number of medical schools teaching some palliative medicine as a mandatory subject/total number of medical schools in the country).

[g]WC: Points for workforce capacity indicator.

[h]Total: Total score points (MS + MC + WC).

[i]The U.K.: According to the Association for Palliative Medicine, there are currently the following palliative care academics in the U.K.: eight professors, one reader, seven senior lecturers, 11 honorary senior lecturers, and two lecturers.

[j]Germany: Data estimated. Because of legislation, all universities in Germany are required to teach palliative care.

[k]Denmark: The National Recommendations for Palliative Care in Denmark suggest that all relevant bachelor degree programs prepare curricula containing palliative care before the end of 2013.

[l]Albania: Ten topics related to palliative care have been integrated into the (mandatory) oncology module in the Faculty of Medicine.

Some methodological issues from this study should be taken into consideration. The lack of quality institutional records with information on PM university education made it necessary to resort to key experts and secondary sources to obtain data. To ensure validity, this required designing strategies for data quality control, as we describe in the Methods section. Consequently, the verification process lends itself to a time lag between the information originally provided by key experts and the data presented in this article. In addition, this international study collected primary data through questionnaires in English, which may have resulted in misunderstandings resulting from the lack of standardized definitions and to the possibility of different meanings or country-specific definitions. To minimize this risk, the questionnaires used in the EAPC Atlas study included a Conceptual Framework and a Glossary of Terms to standardize terminology.[22] Because of the lack of knowledge and evidence in the field, it was necessary to contact experts in PM education to select the criteria and its weights to assess the development status. To reduce the risk of subjective opinions, a nominal group was carried out. This technique is typically used for the development of standards in areas where evidence-based research is absent or inconclusive.[27]

Much work still remains to be done in relation to the development of undergraduate PM education in most European countries, and better records with data on this subject need to be compiled to allow for further research in the area to be undertaken. With this study, we propose development indicators relating to undergraduate PM education. In spite of the lack of information about the content of the course, number of hours, educational methodology, and so forth, this proposal represents a step toward making national and international comparisons and monitoring the overall progress of PM.[28] Furthermore, additional indicators could be considered in the future, including teacher-student ratio, the percentage of medical students who have completed the course in each country, and so forth. In this study, we have proposed a classification system, showing groups of countries that are currently further developed than others, and that could be taken as a reference. However, this level of "development" should not be perceived as a final ranking status for any individual country, but rather as a guide for good management and a "work in progress." In particular, it is worth noting the limited number of full professors and assistant professors that focus on PM across Europe; to integrate PM at the university level, the discipline must meet the demands of academia (i.e., by instituting PhD programs, research activities, and dedicating time to teaching, etc.).

Conclusions

PM is now taught in a substantial number of undergraduate medical programs at European universities with an emerging, appropriately qualified teaching structure; however, there still remains a wide variation in the levels of PM education development between individual countries. The uneven development of PM undergraduate education we have identified in the European context suggests that the integration of PM-specific programs at universities throughout Europe must continue to be advanced to meet the health care needs of European citizens.

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Appendix I

Questions Related to Palliative Medicine Education Included in the Facts Questionnaire and the Eurobarometer Questionnaire

Facts Questionnaire

A. Questions on undergraduate education in Universities and Medical Schools (*)
   1. How many medical schools are there in your country?
   2. Can you provide details of the number of medical schools who have spent time developing a curriculum of Palliative Medicine?
      a) Mandatory component
      b) Optional component
      c) Other component

(*)Please note the criteria we follow:

"*Mandatory component*": components on palliative medicine have been included in mandatory or compulsory teaching for all medical students a) as an independent subject or course with the name "palliative" included in the title, or b) sharing course with other components and with a reference in the title, e.g. "oncology and palliative medicine. "*Optional component*": components on palliative medicine have been included in optional teaching. "*Other component*": a significant number of hours of palliative medicine are included in different courses in a transversal way.

B. Questions on the capacity of palliative care workforce training in Universities and Medical Schools (*)
   1. Can you tell us how many teachers of palliative medicine there are in your country at the present time?
      a) Full professor (cathedratic)
      b) Assistant professor (titular)
      c) Other category of professor (e.g. Associate Professor/Assistant Principal)

(*) In each country, the names of the various academic categories of teachers may be different. We have arbitrarily adopted a three-type classification. The first and second classes (a) and (b) refer to official senior academic bodies. The third category (c) refers to a lower-level category of academic Professor (e.g., part-time). Please place teachers of palliative care in these specific categories, irrespective of the levels of categorization that exist in your country at the present time.

Eurobarometer Questionnaire

5. Education and training initiatives
   5.1 Have there been any developments in palliative care training or education initiatives in your country since January 2006?
   5.2 Since 2006, in what ways has the *under-graduate* system of hospice and palliative care education developed in your country in relation to:
      • Medicine
      • Nursing
      • Social work
      • Other professions
   5.3 Since 2006, in what ways has the *post-graduate* system of hospice and palliative care education developed in your country in relation to:
      • Medicine
      • Nursing
      • Social work
      • Other professions
   5.4 Have any palliative care documents or other materials been translated in your country since January 2006?
   5.5 Have there been any initiatives to develop healthcare professional leadership in hospice and palliative care in your country since January 2006? (For example, faculty development or fellowship programmes).

Appendix II

Key Experts

Albania: Irena Laska, Kristo Huta
Andorra: Xavier Latorre
Armenia: Avetis Babakhanyan, Artashes Tadevosyan
Austria: Mag.a Leena Pelttari, Mag.a Anna H. Pissarek, Johann Baumgatner
Azerbaijan: Gulara Afandiyeva
Belarus: Natallia N. Savva, Olga V. Mychko, Anna Garchakova
Belgium: Johan Menten, Paul Vanden Berghe, Gert Huysmans
Bulgaria: Irena Jivkova Hadjiiska
Croatia: Matija Rimac, Marija Budigam Škvorc, Ana-Marija Kolaric
Cyprus: Sophia Nestoros
Czech Republic: Ondrej Slama, Ladislav Kabelka
Denmark: Helle Timm, Tove Vejlgaard, Mai-Britt Guldin
Estonia: Inga Talvik
Finland: Tiina Hannele Saarto, Juha Hänninen
France: Marilene Filbet, Aubry Régis
Georgia: Ioseb Abesadze, Tamari Rukhadze, Dimitri Kordzaia, Mariam Velijanashvili, Pati Dzotsenidze, Rema Gvamichava, Tamar Gotsiridze
Germany: Friedemann Nauck, Birgit Jasper, Boris Zernikow
Greece: Athina Vadalouka, Kyriaki Mystakidou
Hungary: Katalin Hegedus, Agnes Csikos
Iceland: Svandís Íris Hálfdánardóttir, Valgerdur Sigurdardóttir
Ireland: Mary Ainscough, Karen Ryan, Margaret Clifford
Israel: Jim Shalom, Michaela Bercovitch
Italy: Carlo Peruselli
Kazakhstan: Nadezhda Kozachenko, Valentina Sirota
Latvia: Vilnis Sosars
Lithuania: Rita Kabašinskien, Dalia Skorupskiene
Luxembourg: Marie France Liefgen, Frederic Fogen
Malta: John-Paul Tabone, Antoinette Shah
Montenegro: Jadranka Lakicevic
The Netherlands: Marijke Wulp, José Weststrate
Norway: Dagny Faksvåg Haugen
Poland: Aleksandra Kotlinska-Lemieszek, Aleksandra Ciałkowska-Rysz, Janina Pyszkowska
Portugal: Manuel Luís Vila Capelas
Republic of Macedonia: Mirjana Adzic
Republic of Moldova: Natalia Carafizi, Vadim Pogonet, Valerian Isaac, Anatolie Beresteanu, Maria Chiose, Livia Gudima, Vasile Suruceanu
Romania: Oana Donea, Daniela Mosoiu, Malina Dumitrescu
Russia: Olga Usenko
Serbia: John C. Ely, Natasa Milicevic.
Slovakia: Kristina Križanová, Kjell Erik Stømskag
Slovenia: Mateja Lopuh, Urska Lunder, Jozica Cervec, Maja Seruga, Jernej Benedik, Nevenka Krcevski Skvarc, Maja Ebert Moltara
Spain: Luis Alberto Flores Pérez, Carme Sala Rovira
Sweden: Carl-Magnus Edenbrandt
Switzerland: Steffen Eychmueller
Turkey: Seref Komurcu, Murat Gultekin, Ozgur Ozyilkan
Ukraine: Alexander Wolf, Vasyl Knyazevych, Andriyishyn Lyudmyla-Oksana
U.K.: Robert Melnitschuk, Pam Hester Firth